

AMENDMENTS TO THE CLAIMS

1. (withdrawn) An optical fiber communication system comprising:
 - a signal light output device which comprises a pumping light source which outputs pumping light and a coupler which couples the pumping light to signal light;
 - a plurality of transmission fibers which transmit the signal light outputted from the signal light output device;
 - an erbium-doped fiber module which is positioned between the transmission fibers; and
 - a signal light reception device which receives the signal light which is outputted from the signal light output device and which passes through the transmission fibers and the erbium-doped fiber module,
- wherein the erbium-doped fiber module comprises:
 - a divider which divides the pumping light propagated in a direction the same as that in which the signal light is propagated in the transmission fibers, from the signal light;
 - a branch which branches the pumping light divided by the divider in two direction, at a predetermined ratio;
 - an erbium-doped fiber to which the signal light passing through the divider is inputted; and
 - first and second coupling devices which couple the signal light to the pumping light branching off from the branch, to supply outputs of the first and the second coupling device to both ends of the erbium-doped fiber.

2. (currently amended) An optical fiber communication system comprising:

a signal light output device which outputs signal light having a wavelength in a wavelength band of 1570 nm to 1600 nm;

a plurality of transmission fibers which transmit the signal light outputted from the signal light output device;

an erbium-doped fiber module which is positioned between the transmission fibers; and

a signal light reception device which comprises: a pumping light source which outputs pumping light; and a coupler which couples the pumping light to the signal light which is outputted from the signal light output device and which passes through the transmission fibers and the erbium-doped fiber module, [[to]]and outputs the pumping light in a direction opposite to that in which the signal light is outputted,

wherein the erbium-doped fiber module comprises:

a divider which divides the pumping light propagated in the direction opposite to that in which the signal light is propagated in the transmission fibers, from the signal light;

a branch which branches the pumping light divided by the divider in two directions, with a predetermined branching ratio of 33% to 67%, and outputs a first pumping light beam which is proximately 33% of the pumping light and a second pumping light beam which is proximately 67% of the pumping light;

an erbium-doped fiber to which the signal light is inputted; [[and]]

a first and second coupling device[[s]] which couple the signal light to supplies the first pumping light beam branching off from the branch, to supply outputs of the first and the second coupling devices to both ends of the erbium-doped fiber from a signal-light outputting end of the erbium-doped fiber; and

a second coupling device which couples the signal light to the second pumping light beam branching off from the branch, and supplies the signal light and the second pumping light beam to the erbium-doped fiber from a signal-light inputting end of the erbium-doped fiber.

3. (withdrawn) An optical fiber communication system comprising:

a signal light output device which comprises a pumping light source which outputs pumping light and a coupler which couples the pumping light to signal light;

a plurality of transmission fibers which transmit the signal light outputted from the signal light output device;

an erbium-doped fiber module which is positioned between the transmission fibers; and

a signal light reception device which receives the signal light which is outputted from the signal light output device and which passes through the transmission fibers and the erbium-doped fiber module,

wherein the erbium-doped fiber module comprises:

a circulator to which the signal light and the pumping light are inputted;

a first erbium-doped fiber to which the signal light and the pumping light passing through the circulator are inputted; and

a mirror to which the signal light and the pumping light passing through the first erbium-doped fiber are inputted, and

wherein the signal light and the pumping light reflected by the mirror are outputted to a next stage through the first erbium-doped fiber and the circulator.

4. (withdrawn) An optical fiber communication system as claimed in Claim 3, further comprising a second erbium-doped fiber which is positioned at a front stage of the circulator.

5. (withdrawn) An optical fiber communication system comprising:

a signal light output device which outputs signal light;

a plurality of transmission fibers which transmits the signal light outputted from the signal light output device;

an erbium-doped fiber module which is positioned between the transmission fibers; and

a signal light reception device which comprises: a pumping light source which outputs pumping light; and a coupler which couples the pumping light to the signal light which is outputted from the signal light output device and which passes through the transmission fibers and the erbium-doped fiber module, to output the pumping light in a direction opposite to that in which the signal light is outputted,

wherein the erbium-doped fiber module comprises:

a circulator to which the signal light is inputted;

a divider which divides the pumping light from the signal light;

a coupler which couples the pumping light divided by the divider, to the signal light outputted from the circulator;

a first erbium-doped fiber to which the signal light and the pumping light outputted from the coupler are inputted; and

a mirror to which the signal light and the pumping light passing through the first erbium-doped fiber are inputted, and

wherein the signal light and the pumping light reflected by the mirror are outputted to a next stage through the first erbium-doped fiber and the circulator.

6. (withdrawn) An optical fiber communication system as claimed in Claim 5, further comprising a second erbium-doped fiber which is positioned at a front stage of the circulator,

wherein the coupler is positioned at a front stage of the second erbium-doped fiber.

7. (new) The optical fiber communication system as claimed in claim 2, wherein the first coupling device is a circulator.

8. (new) The optical fiber communication system as claimed in claim 2, further comprising a variable attenuator which is provided between the branch and the first coupling device.